Remarks

Applicants respectfully request reconsideration of the rejection of the claims in view of the above amendments and the remarks set forth below. Claims 1-4 and 6-20 remain in the application. Claims 1-3, 8, and 13-20 are amended. Claim 5 is canceled. Claims 4, 6, 7, and 9-12 remain unchanged.

Claim Objections

Claims 16, 18 and 20 were objected to because there was no antecedent basis for "the recited acts" limitation recited in claims 16, 18 and 20. In accordance with the Examiner's helpful suggestion, Applicants have amended claims 16, 18 and 20 to change "the recited acts" to "the recited steps." Similarly, Applicants have amended claims 13-15, 17 and 19 to clarify that the claims cover method steps. As a result, Applications respectfully propose that claims 16, 18 and 20, as amended, meet the Examiner's objections. Applicants respectfully request that the Examiner withdraw the objections to Claims 16, 18 and 20.

35 U.S.C. §103

Claims 1-3, 6-10 and 12-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hassan et al. (U.S. Patent No. 5,968,198) in view of Rosenberg et al. (U.S. Patent No. 6,141,788).

Under U.S.C. § 103, to establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. (MPEP § 706.02(j)).

Independent claim 1, as amended, recites "a system for generating forward error correction (FEC) packets in a time division multiple access (TDMA) system, comprising...a

first FEC encoder that receives data and encodes first FEC data with the data to form FEC encoded data...*a payload packet formatter that formats the FEC encoded data into a data packet and delivers the data packet to a TDMA time slot*...a second FEC encoder, *in parallel with the payload packet formatter*, that encodes the FEC encoded data to produce second FEC data... and an FEC packet formatter, *in parallel with the payload packet formatter*, that formats the second FEC data into an FEC packet ...*wherein the second FEC encoder and the FEC packet formatter are only utilized when an additional TDMA time slot is available for the FEC packet.*" Support for the newly added "payload packet formatter that formats the FEC encoded data into a data packet and delivers the data packet to a TDMA time slot" limitation is found, among other places, in cancelled claim 5 and in the specification from page 5, line 21 to page 6, line 3. Support for the newly added limitation of having the second FEC encoder and the FEC packet formatter in parallel with the payload packet formatter is found in FIG. 2. Support for the newly added "wherein the second FEC encoder and the FEC packet formatter are only utilized when an additional TDMA time slot is available for the FEC packet" limitation is found in the specification on page 6, lines 12-17.

Hassan appears to be directed towards a decoder utilizing soft information output to minimize error rates. As such, Hassan appears to disclose using a first FEC encoder (figure 4, element 122) in series with a second FEC encoder (figure 4, element 106) to produce FEC encoded data. (Col. 6, lines 29-49). As noted by the Examiner, Hassan does not disclose "a payload packet formatter that formats the FEC encoded data into data packet" and also does not disclose "an FEC packet formatter that formats the second FEC into an FEC packet." Applicants respectfully propose that Hassan also fails to disclose the "*payload packet formatter that formats the FEC encoded data into a data packet and delivers the data packet to a TDMA time slot*...a second FEC encoder, *in parallel with the payload packet formatter*, that encodes the FEC encoded data to produce second FEC data... and an FEC packet formatter, *in parallel with the payload packet formatter*, that formats the second FEC data into an FEC packet ...*wherein the second FEC encoder and the FEC packet formatter are only utilized when an additional TDMA time slot is available for the FEC packet*" recitations of amended claim 1.

Rosenberg appears to be directed towards a method and apparatus for forward error correction in packet networks. As such, Rosenberg appears to disclose generating media packets containing no forward error correction data and generating associated FEC packets containing forward error correction data. (Col. 2, lines 20-44). As noted by the Examiner, Rosenberg, like Hassan, also fails to disclose "a payload packet formatter that formats the FEC encoded data into data packet." Applicants respectfully propose that Rosenberg also fails to disclose the "*payload packet formatter that formats the FEC encoded data into a data packet and delivers the data packet to a TDMA time slot*...a second FEC encoder, *in parallel with the payload packet formatter*, that encodes the FEC encoded data to produce second FEC data... and an FEC packet formatter, *in parallel with the payload packet formatter*, that formats the second FEC data into an FEC packet ...*wherein the second FEC encoder and the FEC packet formatter are only utilized when an additional TDMA time slot is available for the FEC packet*" recitations of amended claim 1.

As discussed above, the "payload packet formatter" limitation of amended claim 1 was incorporated from canceled claim 5. Applicants note that Haoui et al. (U.S. Patent No. 5,742,640) was cited against claim 5 as disclosing "a payload packet formatter that formats the FEC encoded data into a data packet." More particularly, the Haoui multiplexer 36 was described as being a formatter that takes FEC encoded data to form a TDMA data packet. Applicants respectfully disagree. As discussed in col. 2, lines 11-13 of Haoui, time division multiplexer 36 merely interleaves coded samples in time sequence to produce a multiplexed signal on a multiplexed output line. In contrast, the "payload packet formatter" of amended claim 1 "formats the FEC encoded data into a data packet and delivers the data packet to a TDMA time slot." It should be appreciated that a formation of a data packet includes the creation of a data packet header and not merely interleaving samples in a time sequence to produced a multiplexed signal. The operation of the claimed "payload packet formatter" is further described in the Applicants' specification from page 5, line 21 to page 6, line 3. Applicants respectfully propose that Haoui also fails to disclose the "*payload packet formatter that formats the FEC encoded data into a data packet and delivers the data packet to a TDMA time slot*...a second FEC encoder, *in parallel with the payload packet formatter*, that encodes

the FEC encoded data to produce second FEC data... and an FEC packet formatter, *in parallel with the payload packet formatter*, that formats the second FEC data into an FEC packet *...wherein the second FEC encoder and the FEC packet formatter are only utilized when an additional TDMA time slot is available for the FEC packet*" recitations of amended claim 1.

As a result, it is respectfully submitted that Hassan, Rosenberg and Haoui, alone or in combination, do not teach or suggest the "*payload packet formatter that formats the FEC encoded data into a data packet and delivers the data packet to a TDMA time slot*...a second FEC encoder, *in parallel with the payload packet formatter*, that encodes the FEC encoded data to produce second FEC data... and an FEC packet formatter, *in parallel with the payload packet formatter*, that formats the second FEC data into an FEC packet *...wherein the second FEC encoder and the FEC packet formatter are only utilized when an additional TDMA time slot is available for the FEC packet*" recitations of amended claim 1. Therefore, it is respectfully proposed that the rejection of claim 1 under 35 U.S.C. § 103(a) is overcome in accordance with the above amendment and remarks and notice to that effect is earnestly solicited.

Dependent claims 2-4, 6 and 7, being dependent on and further limiting independent claim 1, should be allowable for that reason, as well as for the additional recitations that they contain. Therefore, it is respectfully proposed that the rejection of claims 2-4, 6 and 7 under 35 U.S.C. § 103(a) is overcome in accordance with the above amendment and remarks and notice to that effect is earnestly solicited.

Independent claim 8, as amended, recites "A system for decoding a forward error correction (FEC) packet, comprising...a first FEC decoder that receives *an FEC packet containing first FEC data* and *a data packet containing a data payload and second FEC data... the first FEC decoder partially decoding the data payload and second FEC data contained in the data packet using the first FEC data contained in the FEC packet*...and *a second FEC decoder that receives the partially decoded data payload and second FEC data and further decodes the data payload based on the second FEC data*." Support for the amendment to claim 8 is found in figures 1 and 3 and in the specification from page 3, line 29 to page 5, line 10 and from page 7, line 24 to page 8, line 25.

Hassan appears to be directed towards a decoder utilizing soft information output to minimize error rates. (Col. 1, lines 8-12). As such, Hassan appears to disclose a receiver 104 that receives a signal containing FEC encoded data and decodes the FEC encoded data using decoders 118, 140, 142. (Col. 6, line-49 to col. 8, line 2). Applicants respectfully point out that in the rejection of claims 1 and 5 the Examiner stated that the transmit side 102 of Hassan did not include "a payload packet formatter that formats the FEC data into a data packet" and also did not include "an FEC packet formatter that formats second FEC data into an FEC packet." As a result, it is unclear to Applicants how the Hassan receive side 104 and decoders 118, 140, 142 are receiving either data packets or FEC packets let alone "*an FEC packet containing first FEC data*" and "*a data packet containing a data payload and second FEC data,*" as claimed in amended claim 8, when the transmit side 102 of Hassan is not transmitting data packets or FEC packets. Furthermore, Applicants respectfully propose that Hassan also fails to disclose the "*the first FEC decoder partially decoding the data payload and second FEC data contained in the data packet using the first FEC data contained in the FEC packet*...and *a second FEC decoder that receives the partially decoded data payload and second FEC data and further decodes the data payload based on the second FEC data*" recitations of amended claim 8.

Rosenberg appears to be directed towards a method and apparatus for forward error correction in packet networks. (Col. 1, lines 10-13) As such, Rosenberg appears to disclose generating media packets containing no forward error correction data and generating associated FEC packets containing forward error correction data. (Col. 2, lines 20-44). Using this arrangement, Rosenberg teaches sending and receiving FEC data and media data in two separate packet streams (i.e., a media packet stream and a FEC packet stream). (Col. 2, lines 35-40). This allows FEC-capable receivers to receive and process both media packets and FEC packets and for FEC-incapable receivers to only process media packets. (Col. 1, lines 48-58; col. 2, lines 35-44).

In contrast to Rosenberg, amended claim 8 recites, inter alia, "a first FEC decoder that receives *an FEC packet containing first FEC data* and *a data packet containing a data payload and second FEC data*" In other words, like Rosenberg the system of amended claim 8 receives

two types of packets (i.e., FEC packets and data packets). However, unlike Rosenberg both types of packets received by the system of amended claim 8 contain FEC data (i.e., the FEC packets contain "first FEC data" and the data packets contain "a data payload and second FEC data"). Receiving FEC packets and data packets that both contain FEC data is an important aspect of applicants claimed invention since this permits "the first FEC decoder partially decoding the data payload and second FEC data contained in the data packet *using the first FEC data contained in the FEC packet*...and a second FEC decoder that receives the partially decoded data payload and second FEC data and further decodes the data payload *based on the second FEC data*" as claimed in amended claim 8.

As a result, it is respectfully submitted that Hassan and Rosenberg, alone or in combination, do not teach or suggest the "a first FEC decoder that receives *an FEC packet containing first FEC data* and *a data packet containing a data payload and second FEC data... the first FEC decoder partially decoding the data payload and second FEC data contained in the data packet using the first FEC data contained in the FEC packet*...and *a second FEC decoder that receives the partially decoded data payload and second FEC data and further decodes the data payload based on the second FEC data.*" recitations of amended claim 8. Therefore, it is respectfully proposed that the rejection of claim 8 under 35 U.S.C. § 103(a) is overcome in accordance with the above amendment and remarks and notice to that effect is earnestly solicited.

Dependent claims 9-12, being dependent on and further limiting independent claim 8, should be allowable for that reason, as well as for the additional recitations that they contain. Therefore, it is respectfully proposed that the rejection of claims 9-12 under 35 U.S.C. § 103(a) is overcome in accordance with the above amendment and remarks and notice to that effect is earnestly solicited.

Independent claim 13, as amended, recites "a method of processing forward error correction (FEC) packets, the method comprising the steps of...*receiving a data packet that contains data and first FEC data...receiving an FEC packet that contains second FEC data...* and *deciding whether to use the second FEC data to process the data.*"

Hassan appears to be directed towards a decoder utilizing soft information output to minimize error rates. (Col. 1, lines 8-12). As such, Hassan appears to disclose a receiver 104 that receives a signal containing FEC encoded data and decodes the FEC encoded data using decoders 118, 140, 142. (Col. 6, line-49 to col. 8, line 2). Applicants respectfully point out that in the rejection of claims 1 and 5 the Examiner stated that the transmit side 102 of Hassan did not include "a payload packet formatter that formats the FEC data into a data packet" and also did not include "an FEC packet formatter that formats second FEC data into an FEC packet." As a result, it is unclear to Applicants how the Hassan receive side 104 and decoders 118, 140, 142 are receiving either data packets or FEC packets let alone "*a data packet that contains data and first FEC data*" and "*an FEC packet that contains second FEC data,*" as claimed in amended claim 13, when the transmit side 102 of Hassan is not transmitting data packets or FEC packets. Also, as noted by the Examiner, Hassan fails to disclose the "*deciding whether to use the second FEC data to process the data*" recitation of amended claim 13.

Rosenberg appears to be directed towards a method and apparatus for forward error correction in packet networks. (Col. 1, lines 10-13) As such, Rosenberg appears to disclose generating media packets containing no forward error correction data and generating associated FEC packets containing forward error correction data. (Col. 2, lines 20-44). Using this arrangement, Rosenberg teaches sending and receiving FEC data and media data in two separate packet streams (i.e., a media packet stream and a FEC packet stream). (Col. 2, lines 35-40). This allows FEC-capable receivers to receive and process both media packets and FEC packets and for FEC-incapable receivers to only process media packets. (Col. 1, lines 48-58; col. 2, lines 35-44).

In contrast to Rosenberg, amended claim 13 recites, inter alia, "*receiving a data packet that contains data and first FEC data*" and "*receiving an FEC packet that contains second FEC data.*" In other words, like Rosenberg the system of amended claim 13 receives two types of packets (i.e., FEC packets and data packets). However, unlike Rosenberg both types of packets received by the system of amended claim 13 contain FEC data (i.e., the data packets contain "data and first FEC data" and the FEC packets contain "second FEC data").

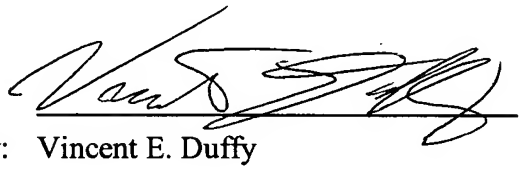
As a result, it is respectfully submitted that Hassan and Rosenberg, alone or in combination, do not teach or suggest the "*receiving a data packet that contains data and first FEC data...receiving an FEC packet that contains second FEC data...* and *deciding whether to use the second FEC data to process the data*" recitations of amended claim 13. Therefore, it is respectfully proposed that the rejection of claim 13 under 35 U.S.C. § 103(a) is overcome in accordance with the above amendment and remarks and notice to that effect is earnestly solicited.

Dependent claims 14-20, being dependent on and further limiting independent claim 13, should be allowable for that reason, as well as for the additional recitations that they contain. Therefore, it is respectfully proposed that the rejection of claims 14-20 under 35 U.S.C. § 103(a) is overcome in accordance with the above amendment and remarks and notice to that effect is earnestly solicited.

Having fully addressed the Examiner's rejections it is believed that, in view of the preceding remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicants' attorney at (317) 587-4019, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No fees are believed due. However, if a fee is due, please charge the additional fee to Deposit Account 07-0832.

Respectfully submitted,



By: Vincent E. Duffy
Reg. No. 39,964
Phone (317) 587-4019

Patent Operations
THOMSON multimedia Licensing, Inc.
P.O. Box 5312
Princeton, New Jersey 08543-5312
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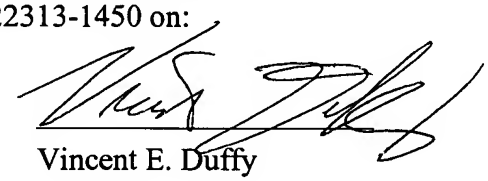

Vincent E. Duffy